09/961,441.

Cofc

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PATENT, TRADEMARK, COPYRIGHT AND RELATED INTELLECTUAL PROPERTY LAW

March 30, 2006

Mail Stop Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Re: U.S. Patent No.: 7,009,666 B2
Issued: March 7, 2006
Inventor: Asad A. Khan et al.
Our Docket: 35601

Sir:

A Certificate of Correction under 35 U.S.C. 254 is hereby requested to correct Patent Office printing errors in the above-identified patent. Enclosed herewith is a proposed Certificate of Correction (Form No. PTO-1050) for consideration along with appropriate documentation supporting the request for correction.

It is requested that the Certificate of Correction be completed and mailed at an early date to the undersigned attorney of record. The proposed corrections are obvious ones and do not in any way change the sense of the application.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Amanda Wittine	Amanda Wittine	March 30, 2006
Name of Depositor	Signature of Depositor	Date

We understand that a check is not required since the errors were on the part of the Patent and Trademark Office in printing the patent.

Very truly yours,

Paul A. Serbinowski, Reg. No. 34429

PAS:alw
Enclosures

PTO/SB/44 (07-03)
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,009,666 B2 PAGE 1 OF 1
DATED : March 7, 2006
INVENTOR(S) : Asad A. Khan et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the cover page, Item (56), References Cited, U.S. Patent Documents, please add:

--6,344,887 2/2002 Ma et al.--

On the cover page, Item (56), References Cited, Other Publications, please add:

--A. Khan et al., P-49: *Characterization of the Helical-Axis Distribution in Reflective Cholesteric LCD's,* Proc. of SID 96, 607 (1996).--

Column 12, line 39, please delete "($C_{3OSRU-P}$)", and insert therefor --($C3_{OSRU-P}$)--.

Column 12, line 48, please delete "C^1_{BSR}", and insert therefor --$C1_{BSR}$--.

Column 12, line 63, please delete "($C3_{OSRU-F, C3OSRD-F}$)", and insert therefor --($C3_{OSRU-F}$, $C3_{OSRD-F}$)--.

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PATENT NO. 7,009,666

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USPTO Form 1449 (modified)

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INFORMATION DISCLOSURE CITATION

Sheet 1 of 1

Attorney Docket No.: 15-875 | Serial No.: 09/961,441

Applicant: Asad Khan

Filing Date: 09/24/2001 | Group: 2871

U.S. PATENT DOCUMENTS

Examiner Initials		Document Number	Date	Name	Class	Subclass	Filing Date (if appropriate)
		6,344,887	02/05/2002	Ma et al.			

FOREIGN PATENT DOCUMENTS

Examiner Initials		Document Number	Date	Country	Class	Subclass	Translation Yes	Translation No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

EXAMINER

DATE CONSIDERED 8/17/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609
Draw Line through citation if not in conformance and not considered.
Include copy of this form with next communication to Applicant

**Copies of references not provided at the time of this submission.

USPTO Form 1449 (modified)	U.S. DEPT. OF COMMERCE PATENT AND TRADEMARK OFFICE	Attorney Docket No.: 15-875	Serial No.: 09/961,441
	INFORMATION DISCLOSURE CITATION	Applicant: Michael E. Stefanov et al.	
	Sheet 1 of 2	Filing Date: September 24, 2001	Group: 2871

U.S. PATENT DOCUMENTS

Examiner Initials		Document Number	Date	Name	Class	Subclass	Filing Date (if appropriate)
		5,847,798	12-08-98	Yang et al.			
		5,920,368	07-06-99	Hatano et al.			
		5,956,113	09-21-99	Crawford			
		6,122,024	09-19-00	Molsen et al.			
		5,796,454	08-18-98	Ma			
		6,023,316	02-08-00	Yano			
		6,104,455	08-15-00	Kashima			
		6,064,455	05-16-00	Kim			
		5,608,553	03-04-97	Kim			
		6,164,790	12-26-00	Lee			
		5,673,128	09-30-97	Ohta et al.			
		5,677,746	10-14-97	Yano			
		5,764,322	06-09-98	Mamiya et al.			
		5,844,540	12-01-98	Terasaki			

FOREIGN PATENT DOCUMENTS

Examiner Initials		Document Number	Date	Country	Class	Subclass	Translation Yes	Translation No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

		A. Khan et al., P-49: *Characterization of the Helical-Axis Distribution in Reflective Cholesteric LCD's*, Proc. of SID 96, 607 (1996).
		B. Taheri et al, *5.3:Optical Properties of Bistable Cholesteric Reflective Displays*, Proc. of SID 96, 39 (1996).
		X.-Y. Huang et al., *LP-1: Late-News Poster: Gray Scale of Bistable Reflective Cholesteric Displays*, Proc. of SID 98, 810 (1998).
		D.-K. Yang et al., *40.1: Invited Address: Cholesteric Liquid-Crystal/Polymer-Gel Dispersions: Reflective Display Applications*, Proc. of SID 92, 759 (1992).
		D.-K Yang et al., *Cholesteric Liquid Crystal/Polymer Gel Dispersion Bistable At Zero Field*, IDRC 1991, 49 (1991).
		M. Schadt et al., *Surface-Induced Parallel Alignment of Liquid Crystals by Linearly Polymerized Photopolymers*, Jpn. J. Appl. Phys. Vol. 3, pp. 2155-2164 (July 1992).
		L. Schlangen et al., *Electro-Optics of Reflective Bistable Chiral Nematic Liquid Crystal Displays: Temperature, Cellgap and Polymide Thickness Dependence*, Proc. of Asia Display 98, 123 (1998).
		J. Doane et al., *S3-6 Front-Lit Flat Panel Display from Polymer Stabilized C holesteric Textures*, Japan Display '92, 73 (1992).

XAMINER	DATE CONSIDERED 11/15/04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609
Draw Line through citation if not in conformance and not considered.
Include copy of this form with next communication to Applicant

**Copies of references not provided at the time of this submission.

cell was very high, with an S3 value greater than .92. This S3 value approaches the maximum possible value of degree of circular polarization for a cholesteric cell. Fig. 8 shows that the degree of circular polarization of the reflected light from the sides of the cell $C3_{OSRU-P}$ and $C3_{OSRD-P}$ was good, with the degree of circular polarization from the rubbed side ($C3_{OSRU-P}$) exceeding that from the unrubbed side ($C3_{OSRD-P}$).

The above results indicate that the selection of alignment layer material and rubbing conditions may strongly influence the electrooptical performance of the cell. The Nissan 7511 polyimide alignment material has a high pretilt angle of about 21° from the substrate. A high pretilt angle alignment layer material is believed to be especially suited for use in a cell in which both sides are rubbed. The high pretilt polyimide $C1_{BSR}$ cell had very high reflectance in the planar state and very low reflectance in the focal-conic state, resulting in very good contrast. In addition, the reflected light had a high degree of circular polarization. The cell having both sides rubbed has a relatively narrow viewing angle, however. The low pretilt alignment materials used in cells C2 (1 degree pretilt) and C3 (3 degree pretilt) rubbed on both sides, had very high focal conic reflectance, and were less suitable than the Nissan 7511 for making cells rubbed on both sides.

All three of the alignment layer materials may be suitable for forming cells having one rubbed side and one side with an inhomogeneous alignment surface. The Nissan 7511 polyimide cell ($C1_{OSR\ U-F}$, $C1_{OSRD-F}$) had the lowest focal-conic reflectance, less than about 8% reflectance. The DuPont 2555 polyimide cell ($C3_{OSRU-F}$, $C3_{OSRD-F}$), and the Nissan 5211 cell ($C2_{OSRU-F}$, $C2_{OSRD-F}$) has less than 16% focal-conic reflectance. It is apparent that while the Nissan 7511 $C1_{OSR}$ cell had the best contrast, it had the lowest degree of circular polarization. The $C2_{OSR}$ and $C3_{OSR}$ cells, on the other hand, had lesser contrast than the $C1_{OSR}$ cell, but good brightness and a high degree of circular polarization. Based upon the foregoing, it will be apparent that one skilled in the art utilizing this disclosure may tailor a cell to a particular application based upon features including rubbing conditions and selection of the alignment layer materials.